

Serial No.: 10/507,467
Office Action Date: November 1, 2007
Amendment Dated: December 4, 2007

REMARKS

Reconsideration of this application is respectfully requested. Applicants believe that consideration of this amendment is proper because they have attempted to comply with every requirement expressly set forth in the previous Office Action dated November 1, 2007 and believe the application is now in condition for allowance.

New claim 23 has been added to the application. This claim specifies that the filter is configured to purify the supply gas of particulates and microorganisms. Support for this claim is found on page 4, lines 29-31 of the application. No new matter is believed to be introduced by this amendment.

Claims 1-2, 4-7, 13, 15, 17-21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Flower in U.S. Patent No. 3,520, 300. Applicants respectfully traverse the rejection. The cited reference fails to recite each and every element of Applicants claims.

In the rejection, it is stated that Flower discloses a supply conduit (40). Flower discloses that a suction pump is actuated, causing a suction force to be applied to the surface of the absorbent member 32. Tube 40 does not supply gas to the member 32, but removes gas from the absorbent member 32. Thus, tube 40 is a discharge tube, not a supply tube.

Flower further fails to reveal supply of a gas to a surgical field. Rather, the device of Flower is a suction device, for removal of blood and other fluids from the surgical site. No gas is supplied. The Examiner points to element 54 of Flower as a gas source, when Flower teaches that it is suction pump. Therefore, gas is flowing into the device (54) of Flower. Applicants' claims feature a gas source for providing a gas to a surgical field, a concept not even mentioned in Flower.

Further, the liquid trap (50) of Flower is suggested in the Office Action as being equivalent to the filter of Applicants' claims. According to *Hawley's Condensed Chemical Dictionary*, 13th Ed., Richard J. Lewis, editor, 1997, filtration requires "separating suspended solids from a liquid (or gas) by forcing the mixture through a porous barrier." The primary definition of "filter" in the Merriam-Webster Online Dictionary is "a porous article or mass through which a gas or liquid is passed to separate out matter in suspension." (Copies enclosed.) The liquid trap of Flower is not equivalent to a filter. Flower's liquid trap merely allows liquid entrained in a gas to deposit after changing the direction of the gas flow. No porous barrier, article or mass is present. Thus, Flower does not teach or suggest a filter for filtering the gas supply.

The Examiner further contends, without support, that a continuous channel extends through the sleeve and first and second surfaces of Flower. Head member 22 of Flower is viewed as being equivalent to the attachment member of Applicants' claims. Surface 28 of the head member is taught as being equivalent to Applicants' first surface

and the outside surface of the head member is viewed as being analogous to Applicants' second surface. In the rejection it is contended that Flower teaches extending the continuous channel through the sleeve and first and second surfaces. However, Flower fails to describe extending of the channel through the second surface. The sleeve is adjacent to, but not surrounded by the second surface, and the channel lies within the sleeve. At best, the sleeve with the channel within it extends "beside" or "next to" the second surface, but not through it.

Regarding independent claim 20, all arguments asserted above with respect to features absent from claim 1 are reasserted here. Since all features of the independent claims are included in the dependent claims, each dependant claim fails to disclose at least the features absent from the associated dependant claim.

Thus, none of Applicants' claims are anticipated by Flowers in U.S. Patent No. 3,520,300. Flowers fails to reveal at least four elements of Applicant's invention as claimed. Applicants have traversed the rejection and respectfully request that this rejection be withdrawn.

Claims 1-2, 3, 4-6, 13, 15 and 17-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Heaton et al. in WO 99/13793 in view of Flower. Heaton does not teach or suggest inclusion of a filter in the supply conduit. Applicants respectfully traverse this rejection as no *prima facie* case of obviousness has been established.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Second, there must be a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). Finally, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Even if the references are combined as suggested in the outstanding Office Action, each and every feature of Applicants' claims has not been shown. Arguments asserted above with respect to Flowers are reasserted here. This is a suction device, no gas supply or supply conduit is taught or shown in Heaton. At least three claim elements are absent from Heaton, including the filter as admitted by the Examiner. Since these same claim elements are absent from Flowers, even in combination, all elements of Applicants' claims are not described.

The Examiner states conclusively that Heaton describes Applicant's device except a filter. No attempt to provide support for this conclusion is provided. It is not clear what device of Heaton is supposed to correspond to the gas supply of Flowers. Applicants find no gas supply associated with the device of Heaton, a surgical drape and suction device. No gas to be supplied to the surgical field has been found. Similarly, The Office Action identifies no reference to a supply gas, a filter, a channel, a sleeve or a first and second surface through which said channel extends. The Examiner has simply failed to apply the reference with specificity, pointing out support for each of Applicants' claim elements.

Further, there was no motivation to combine the references as suggested by the Examiner. In looking to make a device for delivering a gas, Applicant would not seek two suction apparatus, particularly when Heaton adds nothing to the disclosure of Flowers. Heaton, like Flowers, is directed to a way to provide a combination surgical

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drape and suction apparatus. There is no need to seek a filter for a suction device that removes waste products. Since one skilled in the art with Flowers before him would not look to another patent that also fails to solve the problem in hand, Applicants suggest that there is no motivation to combine these references.

Additionally, even if the references were combined as suggested, there is no chance of success at solving Applicants' problem. Neither reference teaches or suggests gas delivery, a gas source, a gas supply or filtration of the gas. Without these features, Applicants' problem cannot be solved.

Therefore, since there is no motivation to combine the references, no likelihood of success and a lack of at least four claim elements, it has been demonstrated that no *prima facie* case of obviousness has been shown. Applicants respectfully request that the rejection be withdrawn and the subject claims allowed to issue.

Claims 8-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Flower in view of Heimlich in U.S. Patent No. 3,762,372. Heimlich reveals a limp catheter with a stiffening means to allow it to be inserted into the urethra. Applicants traverse this rejection as no *prima facie* case of obviousness has been established.

Even if Heimlich teaches all that the Examiner states, it fails to cure the deficiencies of Flower with respect to claim 1. Heimlich's catheter is not a gas delivery system and a gas source, gas supply line, filter and second surface through which a channel flows are not shown. Arguments asserted above with respect to the § 102

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rejection of Flowers are reasserted here. With at least four claim elements absent, each and every claim element is not taught by the combination of Flower and Heimlich.

In addition, there is no likelihood of success in creating a gas delivery system when none of the references disclose delivery of gas. Arguments asserted above with respect to the combination of Flowers and Heaton are reasserted here.

Thus, no *prima facie* case of obviousness can be established where there is little likelihood of success and where the combination fails to disclose at least four claim elements. Applicants respectfully request that the rejection be withdrawn and the subject claims be allowed to issue.

Claims 8-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Flower in view of Heimlich and further in view of Heaton. Applicants traverse this rejection, since no *prima facie* case of obviousness has been established.

Arguments asserted above with respect to Flowers in view of Heaton and Flowers in view of Heimlich are reasserted here. None of the references reveal four claim elements and there is no expectation of success in solving Applicants' problem where none of the references consider gas delivery.

In view of these deficiencies, no *prima facie* case of obviousness has been established. Applicants respectfully request that this rejection be withdrawn and that the subject claims be allowed to issue.

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None of the cited references provides a gas delivery system. Further, the outstanding Office Action evidences picking and choosing of elements in the reference, applying them where there is no suggestion or motivation to do so. References should be considered for all that they disclose.

By the above arguments and amendments, Applicants believe that they have complied with all requirements expressly set forth in the pending Office Action. Issuance of a Notice of Allowance on the remaining allowed claims is respectfully requested. Should the Examiner discover there are remaining issues which may be resolved by a telephone interview, he is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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Hawley's
Condensed Chemical
Dictionary

THIRTEENTH EDITION

Revised by
Richard J. Lewis, Sr.



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for several years at Bryn Mawr. He achieved the synthesis of vitamin K₁ and did fundamental research on cortisone, the chemistry of steroids, and aromatic carcinogens. His achievements as a chemist and educator are recognized throughout the world. Unique in his facility in laboratory demonstration and as a lecturer and author, he exemplified that rare combination of a great teacher and a profound scholar.

filament. A continuous fiber usually made by extrusion from a spinnerette (nylon, rayon, glass, polyethylene). It also may be a drawn metal (tungsten, gold) or a metal carbide.

See fiber.

filament winding. The process of winding fibers under tension onto a prepared core. Before or during the winding operation, the assembly is impregnated with a thermosetting resin. Structures of considerable size and strength can be made in this way. The fibers used are chiefly glass, boron, or silicon carbide.

See filament.

filler. (1) An inert mineral powder of rather high specific gravity (2.00–4.50) used in plastic products and rubber mix to provide a certain degree of stiffness and hardness and to decrease cost. Examples are calcium carbonate (whiting), barytes, blanc fixe, silicates, glass spheres and bubbles, slate flour, soft clays, etc. Fillers have neither reinforcing nor coloring properties, and the term should not be applied to materials that do, i.e., reinforcing agents or pigments. Fillers are similar to extenders and diluents in their cost-reducing function; exact lines of distinction between these terms are difficult, if not impossible, to draw. Use of fillers and extenders in plastics has increased in recent years due to shortages of basic materials.

(2) The cross or transverse thread in a fabric or other textile structure.

(3) A metal or alloy used in brazing and soldering to effect union of the metals being joined.

See diluent; extender; reinforcing agent.

film. An extremely thin continuous sheet of a substance that may or may not be in contact with a substrate. There is no precise upper limit of thickness, but a reasonable assumption is 0.010 inch. The protective value of any film depends on its being 100% continuous, i.e., without holes or cracks, since it must form an efficient barrier to molecules of atmospheric water vapor, oxygen, etc. A long-chain fatty acid or alcohol on water produces a film whose thickness is the length of one molecule (approximately 200 Å). The fatty acid molecules are oriented with the radical end in the water. Such films are good evaporation barriers and have been successfully imposed on glass. Soap bubbles are elastic films about one micron thick and have considerable strength.

Film-forming agents (drying oils) are essential in paints and lacquers. Oxide films formed automatically on the surface of aluminum protect it from corrosion. Thin metallic oxide films are widely used in electronic and semiconducting devices. Electrodeposited metals (chromium, copper, nickel) are conventionally (and perhaps illogically) called coatings.

The term film is also applied to sheets of cellophane, polyethylene, polyvinylidene chloride, etc., used for wrapping and packaging of food products, meats, and poultry (especially shrink films that are stretched before application). These function as a moisture vapor barrier. Plastic films are also used as slip surfaces in concrete structures such as airstrips, ice rinks, and highways. Photographic film is made from cellulose acetate.

filter. See filtration; leaf, filter; baghouse.

filter aid. See filter media; filtration.


filter alum. See aluminum sulfate.

filter medium. Almost any water-insoluble, porous material having a reasonable degree of rigidity can serve as a filter. Sand is used in simple large-scale water filtration, the voids between the grains providing the porosity. In industrial operations, cotton duck, woven wire cloth, nylon cloth, and glass cloth are used. For laboratory work, Whatman filter paper, diatomaceous earth, and closely packed glass fibers are standard materials. Plastics membranes containing more than a million pores per square inch are used in bacteriological filtration.

See filtration; screen.


filter sand. Sand used to separate sediment and suspended matter from water.

filtration. The operation of separating suspended solids from a liquid (or gas) by forcing the mixture through a porous barrier (see filter media). The construction and operation of the many kinds of industrial filtration equipment are too detailed to permit description. The most widely used types may be classified as follows: (1) gravity filters, used largely for water purification and consisting of thick beds of sand and gravel that retain the flocculated impurities as the water passes through; (2) pressure filters of plate-and-frame or shell-and-leaf construction that utilize filter cloths of coarse fabric as a separating medium; (3) vacuum or suction filters of the rotating drum or disk type, used on thick sludges and slurries; (4) edge filters; (5) clarification filters; (6) bag filters (dust collectors). Gel filtration is a chromatographic technique involving separation at the molecular level. For bacteriological filtration, membranes having more than a million pores per square inch are used, e.g., collodion or synthetic film. Some types of viruses will pass




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filter

8 entries found.

filter [1.noun]

filter[2.verb]

band-pass filter


color filter

filter bed

filter feeder

filter paper

filter tip

Main Entry: **'fil-ter** 

Pronunciation: \fil-tər\

Function: *noun*

Etymology: Middle English *filtre*, from Medieval Latin *filtrum* piece of felt used as a filter, of Germanic origin; akin to Old High German *filz* felt — more at **FELT**

Date: 1563

1 a : a porous article or mass (as of paper or sand) through which a gas or liquid is passed to separate out matter in suspension **b :** an apparatus containing a filter medium

2 a : a device or material for suppressing or minimizing waves or oscillations of certain frequencies (as of electricity, light, or sound) **b :** a transparent material (as colored glass) that absorbs light of certain wavelengths or colors selectively and is used for modifying light that reaches a sensitized photographic material —called also *color filter*

3 : something that has the effect of a filter (as by holding back elements or modifying the appearance of something) <his work is too often viewed through the *filter* of race — Brent Staples>

4 : software for sorting or blocking access to certain online material

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